

IN THE CLAIMS:

Please amend the claims, as follows:

1-6. Canceled

7. (Currently amended) The driving circuit according to claim 5 A driving circuit comprising:

a first current mirror circuit which outputs a plurality of output currents each of which corresponds to a reference current, said first current mirror circuit comprising:

a reference current input terminal to which said reference current is supplied;

a power supply terminal to which power is supplied;

a first circuit provided between said reference current input terminal and said power supply terminal, to determine said plurality of output currents;

a common power supply line which extends from said power supply terminal;

a plurality of output terminals;

a plurality of second circuits provided between said common power supply line and said plurality of output terminals, to output a part of said plurality of output currents determined by said first circuit through said plurality of output terminals; and

a third circuit provided at a next stage of said plurality of second circuits as said final stage of said first current mirror circuit, to output said output current determined by said first circuit; and

a second current mirror circuit which converts a polarity of an output current outputted from a final stage of said first current mirror circuit and outputs the converted output current, said second current mirror circuit converting said polarity of said output current outputted from said third circuit and outputs said converted output current through a

reference current output terminal,

wherein:

said first circuit, said second circuits and said third circuit included in said first current mirror circuit comprise PNP transistors, and said second current mirror circuit comprises NPN transistors.

at least one of said first current mirror circuit and said second current mirror circuit includes a base current compensating circuit, and wherein

said power supply terminal is pulled out from a center of said common power supply line.

8. (Currently amended) The driving circuit according to claim 5, A driving circuit comprising:

a first current mirror circuit which outputs a plurality of output currents each of which corresponds to a reference current, said first current mirror circuit comprising:

a reference current input terminal to which said reference current is supplied;

a power supply terminal to which power is supplied;

a first circuit provided between said reference current input terminal and said power supply terminal, to determine said plurality of output currents;

a common power supply line which extends from said power supply terminal;

a plurality of output terminals;

a plurality of second circuits provided between said common power supply line and said plurality of output terminals, to output a part of said plurality of output currents determined by said first circuit through said plurality of output terminals; and

a third circuit provided at a next stage of said plurality of second circuits as said final stage of said first current mirror circuit, to output said output current determined by said first circuit; and

a second current mirror circuit which converts a polarity of an output current outputted from a final stage of said first current mirror circuit and outputs the converted output current, said second current mirror circuit converting said polarity of said output current outputted from said third circuit and outputs said converted output current through a reference current output terminal,

wherein:

said first circuit, said second circuits and said third circuit included in said first current mirror circuit comprise PNP transistors, and said second current mirror circuit comprises NPN transistors.

at least one of said first current mirror circuit and said second current mirror circuit includes a base current compensating circuit, and wherein

said power supply terminal is pulled out from a plurality of positions of said common power supply line.

9-13. (Canceled)

14. (Currently amended) ~~The driving circuit according to claim 12, A driving circuit comprising:~~

a first current mirror circuit which outputs a plurality of output currents each of which corresponds to a reference current; and

a second current mirror circuit which converts a polarity of an output current outputted from a final stage of said first current mirror circuit and outputs the converted output current,

wherein:

said first current mirror circuit comprises:

a reference current input terminal to which said reference current is supplied;

a ground terminal which is connected to a ground;

a first circuit provided between said reference current input terminal and said ground terminal, to determine said plurality of output currents;

a common ground line which extends from said ground terminal;

a plurality of output terminals;

a plurality of second circuits provided between said common ground line and said plurality of output terminals, to output a part of said plurality of output currents determined by said first circuit through said plurality of output terminals; and

a third circuit provided at a next stage of said plurality of second circuits as said final stage of said first current mirror circuit, to output said output current determined by said first circuit,

said second current mirror circuit converts said polarity of said output current outputted from said third circuit and outputs said converted output current through a reference current output terminal,

said first circuit, said second circuits and said third circuit included in said first current mirror circuit comprise NPN transistors, and said second current mirror circuit comprises PNP transistors,

at least one of said first current mirror circuit and said second current mirror circuit includes a base current compensating circuit, and wherein
said ground terminal is pulled out from a center of said common ground line.

15. (Currently amended) The driving circuit according to claim 12, A driving circuit comprising:

a first current mirror circuit which outputs a plurality of output currents each of which corresponds to a reference current; and
a second current mirror circuit which converts a polarity of an output current outputted from a final stage of said first current mirror circuit and outputs the converted output current,

wherein:

said first current mirror circuit further comprises:
a reference current input terminal to which said reference current is supplied;
a ground terminal which is connected to a ground;
a first circuit provided between said reference current input terminal and said ground terminal, to determine said plurality of output currents;

a common ground line which extends from said ground terminal;
a plurality of output terminals;
a plurality of second circuits provided between said common ground line and said plurality of output terminals, to output a part of said plurality of output currents determined by said first circuit through said plurality of output terminals; and
a third circuit provided at a next stage of said plurality of second circuits as

said final stage of said first current mirror circuit, to output said output current determined by said first circuit,

said second current mirror circuit converts said polarity of said output current outputted from said third circuit and outputs said converted output current through a reference current output terminal,

said first circuit, said second circuits and said third circuit included in said first current mirror circuit comprise NPN transistors, and said second current mirror circuit comprises PNP transistors,

at least one of said first current mirror circuit and said second current mirror circuit includes a base current compensating circuit, and wherein

 said ground terminal is pulled out from a plurality of positions of said common ground line.

16. (Original claim) A constant current driving apparatus comprising a plurality of driving circuits connected through terminals in series, each of which comprises:

 a first current mirror circuit which outputs a plurality of output currents each of which corresponds to a reference current; and

 a second current mirror circuit which converts a polarity of an output current outputted from a final stage of said first current mirror circuit and outputs the converted output current.

17. (Currently amended) The constant current driving apparatus according to claim 16, wherein said first current mirror circuit comprising comprises:

a reference current input terminal to which said reference current is supplied;

a power supply terminal to which power is supplied;

a first circuit provided between said reference current input terminal and said power supply terminal, to determine said plurality of output currents;

a common power supply line which extends from said power supply terminal;

a plurality of output terminals;

a plurality of second circuits provided between said common power supply line and said plurality of output terminals, to output a part of said plurality of output currents determined by said first circuit through said plurality of output terminals; and

a third circuit provided at a next stage of said plurality of second circuits as said final stage of said first current mirror circuit, to output said output current determined by said first circuit.

18. (Original claim) The constant current driving apparatus according to claim 17, wherein said second current mirror circuit converts said polarity of said output current outputted from said third circuit and outputs said converted output current through a reference current output terminal.

19. (Currently amended) The constant current driving apparatus according to claim 18, wherein said first circuit, said second circuits and said third circuit included in said first current mirror circuit ~~are constituted by~~ comprise PNP transistors, and said second current mirror circuit ~~is constituted by~~ comprises NPN transistors.

20. (Currently amended) The constant current driving apparatus according to claim 19, wherein at least one of said first current mirror circuit and said second current mirror circuit ~~has~~ includes a base current compensating circuit.

21. (Currently amended) The constant current driving apparatus according to claim 18, wherein said first circuit, said second circuits and said third circuit included in said first current mirror circuit ~~are constituted by~~ comprise P-channel MOS transistors, and said second current mirror circuit ~~is constituted by~~ comprises N-channel MOS transistors.

22. (Currently amended) The constant current driving apparatus according to claim 16, wherein said first current mirror circuit ~~comprising~~ comprises:

- a reference current input terminal to which said reference current is supplied;
- a ground terminal which is connected to a ground;
- a first circuit provided between said reference current input terminal and said ground terminal, to determine said plurality of output currents;
- a common ground line which extends from said ground terminal;
- a plurality of output terminals;
- a plurality of second circuits provided between said common ground line and said plurality of output terminals, to output a part of said plurality of output currents determined by said first circuit through said plurality of output terminals; and
- a third circuit provided at a next stage of said plurality of second circuits as said final stage of said first current mirror circuit, to output said output current determined by said first

circuit.

23. (Original claim) The constant current driving apparatus according to claim 22, wherein said second current mirror circuit converts said polarity of said output current outputted from said third circuit and outputs said converted output current through a reference current output terminal.

24. (Currently amended) The constant current driving apparatus according to claim 23, wherein said first circuit, said second circuits and said third circuit included in said first current mirror circuit ~~are constituted by~~ comprise NPN transistors, and said second current mirror circuit ~~is constituted by~~ comprises PNP transistors.

25. (Currently amended) The constant current driving apparatus according to claim 24, wherein at least one of said first current mirror circuit and said second current mirror circuit ~~has~~ includes a base current compensating circuit.

26. (Currently amended) The constant current driving apparatus according to claim 23, wherein said first circuit, said second circuits and said third circuit included in said first current mirror circuit ~~are constituted by~~ comprise N-channel MOS transistors, and said second current mirror circuit ~~is constituted by~~ comprises P-channel MOS transistors.